

TROP-2 (h): 293T Lysate: sc-176454

BACKGROUND

TROP-2, also known as tumor-associated calcium signal transducer 2 (TACSTD2); pancreatic carcinoma marker protein GA733-1; membrane component chromosome 1, surface marker 1 (M1S1); or epithelial glycoprotein-1 (EGP-1), is a cell surface glycoprotein receptor. It is a single pass type I membrane protein containing one thyroglobulin type 1 domain, an epidermal growth factor-like repeat, a phosphatidylinositol binding site and tyrosine phosphorylation sites near the C-terminus. TROP-2 plays a role in transducing intracellular calcium signals. It is expressed in trophoblast cells, cornea and multistratified epithelia. It is also highly expressed in several types of tumors and is involved in regulating the growth of carcinoma cells. Mutations in the gene encoding TROP-2 can result in gelatinous drop-like corneal dystrophy (GDLD), also referred to as lattice corneal dystrophy type III, an autosomal recessive disorder that causes severe visual impairment.

REFERENCES

1. Linnenbach, A.J., et al. 1989. Sequence investigation of the major gastrointestinal tumor-associated antigen gene family, GA733. *Proc. Natl. Acad. Sci. USA* 86: 27-31.
2. Fornaro, M., et al. 1995. Cloning of the gene encoding TROP-2, a cell-surface glycoprotein expressed by human carcinomas. *Int. J. Cancer* 62: 610-618.
3. Tsujikawa, M., et al. 1999. Identification of the gene responsible for gelatinous drop-like corneal dystrophy. *Nat. Genet.* 21: 420-423.
4. Tasa, G., et al. 2001. A novel mutation in the M1S1 gene responsible for gelatinous droplike corneal dystrophy. *Invest. Ophthalmol. Vis. Sci.* 42: 2762-2764.
5. Ren, Z., et al. 2002. Allelic and locus heterogeneity in autosomal recessive gelatinous drop-like corneal dystrophy. *Hum. Genet.* 110: 568-577.
6. Murakami, A., et al. 2004. Mutations in the membrane component, chromosome 1, surface marker 1 (M1S1) gene in gelatinous drop-like corneal dystrophy. *Jpn. J. Ophthalmol.* 48: 317-320.
7. Taniguchi, Y., et al. 2005. A novel missense mutation in a Japanese patient with gelatinous drop-like corneal dystrophy. *Am. J. Ophthalmol.* 139: 186-188.
8. Shimada, A., et al. 2005. Establishment of an immortalized cell line from a precancerous lesion of lung adenocarcinoma, and genes highly expressed in the early stages of lung adenocarcinoma development. *Cancer Sci.* 96: 668-675.
9. Ohmachi, T., et al. 2006. Clinical significance of TROP-2 expression in colorectal cancer. *Clin. Cancer Res.* 12: 3057-3063.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: TACSTD2 (human) mapping to 1p32.1.

PRODUCT

TROP-2 (h): 293T Lysate represents a lysate of human TROP-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TROP-2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TROP-2 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

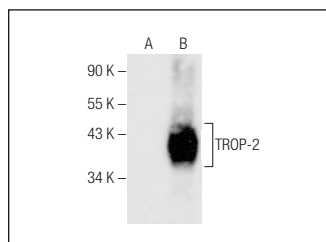
TROP-2 (B-9): sc-376746 is recommended as a positive control antibody for Western Blot analysis of enhanced human TROP-2 expression in TROP-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

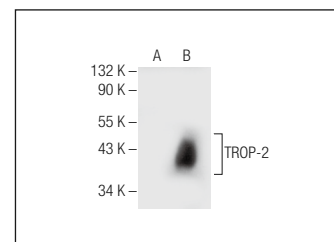
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



TROP-2 (B-9): sc-376746. Western blot analysis of TROP-2 expression in non-transfected: sc-117752 (A) and human TROP-2 transfected: sc-176454 (B) 293T whole cell lysates.



TROP-2 (F-5): sc-376181. Western blot analysis of TROP-2 expression in non-transfected: sc-117752 (A) and human TROP-2 transfected: sc-176454 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.